[redacted]

26 September 1969

MEMORANDUM

SUBJECT : Possible DDP Use of the Compuscan 370 Optical Character Reader

1. At the request of Chief, DDP/SG, I have begun looking into the possibility of [redacted] replacing some of the key punching operations involved in DDP systems with optical character reader (OCR) operations. The OCR device of our immediate interest is the Compuscan 370. Attached is some current literature on the 370.

2. From a look at the ADP Accounting for CY 1968, we can see that the greatest volume of key punching and verifying is accomplished in connection with the GICS, Document/File Control, and [redacted] subsystems. These three subsystems account for almost two-thirds of the key punching and verifying volume (KPV Volume) noted in the ADP Accounting. Attached is a worksheet showing KPV Volume and percentages of total KPV Volume for [redacted] the dozen or so subsystems having the heaviest KPV workload in 1968.

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3. Attached also are samples of the input forms used for five of the subsystems. A "Yes" or a "Y" in the leftmost column of the worksheet shows that one or two sample input forms are attached for the subsystem indicated.

4. In the right-hand column of the worksheet I have begun entering the input medium used for the indicated subsystem. I believe that the input medium is punched cards for most of the subsystems, although I do not expect to have confirmed all of them by the time I turn this job over to Anne.

5. The prominent exception to the general use of punched cards for input occurs occurs in the case of the [redacted] portion of the [redacted] subsystem. SB uses another OCR, the CDC 915, for its input. One of the attached sample input forms is of the type used by SB for this purpose. Note the special type that must be used . The 915 reads only this font, producing magnetic tape as output. In the course of talking to [redacted] about [redacted] SB's methods, I learned that [redacted] of OCS is the Agency's leading authority on the device, so I went to see him. The next paragraphs summarize what he had to say about the 915.

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6. The Agency has had the 915 for a number of years. Al doesn't recall just how many, but he was been working on programs for it since 1967. The first machine was a very early one, number eleven or so off the assembly line. CDC later replaced the first machine with another that had been de-bugged to some extent. But there have been many problems with it over the years. Today the machine is working fairly well. In the applications with which he is familiar, there is a rejection rate

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Declassified by 054979
date 21 DEC 1973

of about one half of one percent (they punch cards whenever the OCR rejects something) and he understands that some of the users have had a still lower rejection rate. The other users are Personnel and CRS; the major users, that is. Personnel is impressed with the 915 and is now studying a plan to lease a second one for an expanded system.

7. One drawback to the 915 is its small CPU, called the CDC 8092 Teleprogrammer, which limits the 915 to reading only. Editing for errors requires a pass of the tape through the 360 before the tape can be used for ZZ input. Al has written editing programs for this purpose. CDC plans to come out with a new OCR that may be capable of editing. Exact specifications of the new model are not known to Al. He did not have on hand any figures showing to what extent the 915 is currently being used, nor what the overall rejection rate is, but he said that he would get some figures and let us know.

8. This superffcial exploration into what the 915 can do seemed to me to be in order, since it represents the Agency's only experience to date with OCRs in general, as far as I have been able to ascertain. It gives us something to compare the 370 to.

9. Several questions that have occurred to me while thinking about the 370 might be worth studying.

Re OCRs in general:

a. Are there any models other than the Compuscan 370 and the CDC 915 that are worth our study?

Re the Compuscan 370:

b. Does the machine ignore the printed headings and other printed entries on the input forms, or can it be programmed to ignore them?

c. If not, must we revise the forms we are now using? (For the 915, forms with a special type of gray ink must be used; see attached sample.)

Re the 370's requirement for microfilming:

d. Do any of our customers already microfilm the input forms at any stage in the information flow?

e. If not, could they modify that flow to delete key-punching and insert micro-filming?

f. If they did modify the flow in this manner, what would be the saving in time and money?

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Re the Agency-leased CDC 915:

g. Can a larger share of the DDP workload be ~~xk~~ adapted to the 915 with a comparatively greater saving than that which could be effected with the 370?

h. How will the next model of the CDC OCR (the multi-font reading OCR) affect the answer to g?

Miscellaneous:

i. What amount of input to the key-punch operation is now in handwritten form, as the [redacted] input is, for example?

10. The foregoing paragraphs synthesize all of the results of my inquiry to date.

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